

Application No. : 10/749,325
Filed : December 29, 2003

REMARKS

Claims 1-24 and 29-39 were pending in the application. By this paper, Applicant has canceled Claims 2, 12, 14, and 30-32 without prejudice, amended Claims 1, 13, and 33, and added new Claims 40-42. Accordingly, Claims 1, 3-11, 13, 15-24, 29, and 33-42 and are presented for examination herein.

Note to Examiner

Claims 25-28 were cancelled in Applicant's 05-07-07 response. As such, Claims 25-28 are respectfully no longer pending.

Allowed and Allowable Subject Matter

Claims 29, 38 and 39 – Claims 29, 38, and 39 have been allowed by the Examiner. Applicant thanks the Examiner for this allowance.

§103 Rejections

Claim 1 – The Examiner has rejected Claim 1 under 35 U.S.C. §103(a) as being unpatentable over Stone et al. (U.S. Patent Application No. 2002/0152346; hereinafter, "Stone") in view of Crutchfield et al. (U.S. Patent Application No. 2002/0196884; hereinafter, "Crutchfield") and in further view of what is well known in the art.

By this paper, Applicant has amended Claim 1 to include limitations relating to allowing the recited 10-bit symbol to be removed from the FIFO only on four out of every five TX clock cycles associated with the second clock. Support for this amendment is replete throughout Applicant's specification, and can be found specifically, for example, at page 4, par. [0008], lines 7-8. Hence, no new matter has been added.

Applicant respectfully asserts this limitation would not have been obvious to a person of ordinary skill in the art in light of Jones, Crutchfield, or what was well known in the art at the time the invention was made, either when acting alone or in combination.

Moreover, Applicant respectfully asserts that any Official Notice taken with regards to amended Claim 1 would respectfully be improper if this Official Notice utilized the same logic as the Official Notice taken with respect to Claim 2 (now cancelled without prejudice). As stated by MPEP 2144.03, Section A:

“Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.”

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Applicant respectfully asserts that allowing removal of a 10-bit symbol in the FIFO only on four out of every five clock cycles associated with a second clock is not such “common knowledge” in the art that is capable of “instant and unquestionable demonstration.” Should the Examiner contend that it is, Applicant respectfully requests explicit support for such assertions.

10 Applicant also notes that for the purposes of this discussion it is irrelevant whether it would have been obvious for a person of ordinary skill in the art to “remove a symbol from the FIFO on *every* clock cycle” (as the Examiner has asserted with respect to Claim 2). This is because Applicant’s amended Claim 1 presently recites, in relevant part: “allowing the 10-bit symbol to be removed from the FIFO only on four out of every five TX clock cycles associated
15 with the second clock” (emphasis added). A system which removes a symbol from the FIFO on *every* clock cycle cannot be said to remove a symbol from the FIFO only on four out of every five TX clock cycles, as Applicant has specifically claimed herein.

For these reasons, Applicant respectfully asserts that amended Claim 1 is presently in condition for allowance.

20 Claims 3-9 depend directly or indirectly on Claim 1 and are therefore also respectfully in condition for allowance.

Claim 2 – The Examiner has also rejected Claim 2 under 35 USC §103(a). By this paper, Applicant has cancelled Claim 2 without prejudice, thereby rendering this rejection moot.

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Claim 10 – The Examiner has rejected Claim 10 under 35 U.S.C. §103(a) as being unpatentable over Stone (U.S. Patent Application No. 2002/0152346) in view of Crutchfield (U.S. Patent Application No. 2002/0196884), in view of Tatum et al. (U.S. Patent No. 6,728,280; hereinafter, “Tatum”), in view of Thayer et al. (U.S. Patent No. 5,590,378; hereinafter, “Thayer”), and in view of Anderson et al. (U.S. Patent No. 5,845,152; hereinafter, “Anderson”).
30 Applicant respectfully disagrees and traverses.

The Examiner has asserted that a method of data alignment for transferring data between devices of differing widths is taught by Thayer (col. 1, lines 12-16; col. 2, lines 10-19, and Figs. 11A-11G), and since this much is taught, therefore “*assembling a 10-bit symbol from the 8 bit byte stored in the first register and appending two bits from the 8-bit byte stored in the second register*” would have been obvious to a person of ordinary skill in the art in light of the teaching of Thayer.

Applicant respectfully submits that there are two problems with the Examiner’s contention. The first is that Thayer only describes output sizes which are a direct multiple of one or more of his input sequence combinations. As Figs. 11A – 11G illustrate, the only combinations shown which can be mapped into one or more 24 bit sequences are 8 bit and 16 bit input sequences. Granted, if the input sequences comprise less data than what is required by the combined size of the outputs, the extra portion of the output(s) can be padded with zeros. However, the net result is that any 24 bit output stream can always be represented by three separate 8 bit sequences.

Thayer, however, neither teaches nor suggests a method for handling a situation where the target output comprises a size that is a non-multiple of the target input. In these situations, imperfect mappings often become necessary (for example, as by Applicant’s *assembling a 10-bit symbol from the 8 bit byte stored in the first register and appending two bits from the 8-bit byte stored in the second register*). Such a system is significantly more complex than that described by Thayer, since the selected mapping scheme varies according to the bits leftover from the last mapping.

The second problem with this contention is that the Examiner appears to have assumed that the only reason for Applicant’s recited limitation is to facilitate transferring data between devices of differing widths. This ignores the fact that Applicant can be operating across different clock domains. That is to say, the limitations recited in Applicant’s Claim 10 (including the limitation in question) not only facilitate transfers of data between busses of differing widths, but simultaneously can facilitate transfers across buses driven by separate clocks. By contrast, Thayer has not selected any of his mappings based upon the need to accommodate devices operating on different clocks and makes no such suggestion, and thus, a person of ordinary skill in the art would have no reason to ever arrive at Applicant’s particular solution.

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For these reasons, Applicant respectfully asserts that it would not have been obvious for a person of ordinary skill in the art to arrive at all of Applicant's limitations in light of the prior art when acting alone or in combination. Therefore, Claim 10 is respectfully in condition for allowance.

5 Claim 11 depends on Claim 10, and is therefore also respectfully in condition for allowance.

Claim 13 – The Examiner has rejected Claim 13 under 35 U.S.C. §103(a) as being unpatentable over Stone (U.S. Patent Application No. 2002/0152346) in view of Crutchfield
10 (U.S. Patent Application No. 2002/0196884).

By this paper, Applicant has amended Claim 13 to include limitations relating to allowing the 10-bit symbol to be removed from the FIFO only on four out of every five TX clock cycles associated with the second clock. Support for this amendment is replete throughout Applicant's specification, and can be found specifically, for example, at page 4, par. [0008], lines 7-8. No
15 new matter has been added.

Applicant respectfully asserts that Claim 13 is allowable in that none of the cited art fairly teaches or suggests the limitations of Claim 13.

Claims 15-21 depend directly or indirectly on Claim 13, and are therefore also respectfully in condition for allowance.
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Claim 14 – The Examiner has also rejected Claim 14 under 35 USC §103(a). By this paper, Applicant has cancelled Claim 14 without prejudice, thereby rendering this rejection moot.

25 **Claim 22** – The Examiner has rejected Claim 22 under 35 U.S.C. §103(a) as being unpatentable over Stone (U.S. Patent Application No. 2002/0152346) in view of Crutchfield (U.S. Patent Application No. 2002/0196884), and in further view of Thayer. (U.S. Patent No. 5,590,378). Applicant respectfully disagrees and traverses.

The Examiner has contends that "*assembling a 10-bit symbol from the 8-bit byte stored in
30 the first register and appending two bits from the 8-bit byte stored in the second register*" would have been obvious to a person of ordinary skill in the art in light of Thayer. Applicant traverses

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this finding for reasons already provided above with respect to Claim 10. As such, Applicant respectfully asserts that Claim 22 is in condition for allowance.

Claims 23-24 depend directly or indirectly on Claim 22, and are therefore also respectfully in condition for allowance.

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Claims 30-32 – The Examiner has also rejected Claims 30 - 32 under 35 U.S.C. §103(a). By this paper, Applicant has cancelled Claims 30-32 without prejudice, thereby rendering this rejection moot.

10 **Claim 33** – The Examiner has also rejected Claim 33 under 35 U.S.C. §103(a) as being unpatentable over Stone (U.S. Patent Application No. 2002/0152346) in view of Crutchfield (U.S. Patent Application No. 2002/0196884) and in further view of what is well known in the art.

By this paper, Applicant has amended Claim 33 to include limitations relating to generating a first multi-bit symbol on first physical interface having a port only on fifty-eight out
15 of every fifty-nine clock cycles associated with the first clock, wherein the multi-bit symbol is
compliant with a first transmission protocol. Support for this amendment is replete throughout Applicant's specification, and can be found specifically, for example, at page 3, par. [0006], lines 1-5.

Applicant respectfully asserts the prior art references, when acting alone or in
20 combination, neither teach nor suggest the aforementioned limitation. For this reason, Applicant respectfully asserts that Claim 33 is presently in condition for allowance.

Moreover, since Claims 34-37 depend directly or indirectly on Claim 33, Applicant submits that they are also in condition for allowance.

25 *Claim Objections*

Claim 12 - The Examiner has objected to Claim 12 as being dependent upon a rejected base claim, but has stated that this claim would otherwise be allowable if rewritten in independent form, including any intervening claims. By this paper, Applicant has cancelled Claim 12 without prejudice, and has created new Claim 40, which corresponds generally to
30 Claim 12 and includes all of the limitations present in the claims on which it depends (Claims 10 and 11). No new matter has been added by this amendment.

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Other New Claims

Claims 41 and 42 – By this paper, Applicant has added new Claims 41 and 42. Support for these claims is replete throughout Applicant's specification, and no new matter has been added.

Applicant respectfully submits that Claims 41 and 42 are distinguishable from the art of record for at least reciting limitations wherein the frequency of null character deletion is used to control a phased locked loop associated with a second clock.

For these reasons, Applicant respectfully asserts that Claims 41 and 42 are presently in condition for allowance.

Other Remarks

Applicant hereby specifically reserves all rights of appeal (including those under the Pilot Appeal Brief Program), as well as the right to prosecute claims of different scope in another continuation or divisional application.

Applicant notes that any claim cancellations or additions made herein are made solely for the purposes of more clearly and particularly describing and claiming the invention, and not for purposes of overcoming art or for patentability. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant's position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such cancellations or additions.

Furthermore, any remarks made with respect to a given claim or claims are limited solely to such claim or claims. If the Examiner has any questions or comments which may be resolved over the telephone, he is requested to call the undersigned at (858) 675-1670.

Respectfully submitted,

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